

SEQUENCE LISTING

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KOIZUMI, SCHUICHI
KOHSAKA, SHINICHI
KOHSAKA, KAZUHIDE INOUE

<120> A SCREENING METHOD OF DRUG FOR TREATMENT OF NEUROPATHIC PAIN

<130> U 014843-4

<140> ---

<141> 2003-10-01

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<170> PatentIn version 3.2

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Thr Pro Arg Ile Val Leu Ile Arg Ser Arg Lys Val Gly Leu Met Asn
20 25 30

cgc gcc gtg caa ctg ctc atc ctg gcc tac gtc atc ggg tgg gtg ttt
Arg Ala Val Gln Leu Leu Ile Leu Ala Tyr Val Ile Gly Trp Val Phe
35 40 45

gtg tgg gaa aag ggc tac cag gaa act gac tcc gtg gtc agc tcc gtt
Val Trp Glu Lys Gly Tyr Gln Glu Thr Asp Ser Val Val Ser Ser Val
50 55 60

acg acc aag gtc aag ggc gtg gct gtg acc aac act tct aaa ctt gga
Thr Thr Lys Val Lys Gly Val Ala Val Thr Asn Thr Ser Lys Leu Gly
65 70 75 80

ttc cgg atc tgg gat gtg gcg gat tat gtg ata cca gct cag gag gaa
Phe Arg Ile Trp Asp Val Ala Asp Tyr Val Ile Pro Ala Gln Glu Glu
85 90 95

aac tcc ctc ttc gtc atg acc aac gtg atc ctc acc atg aac cag aca
Asn Ser Leu Phe Val Met Thr Asn Val Ile Leu Thr Met Asn Gln Thr
100 105 110

cag ggc ctg tgc ccc gag att cca gat gcg acc act gtg tgt aaa tca
Gln Gly Leu Cys Pro Glu Ile Pro Asp Ala Thr Thr Val Cys Lys Ser
115 120 125

gat gcc agc tgt act gcc ggc tct gcc ggc acc cac agc aac gga gtc		432	
Asp Ala Ser Cys Thr Ala Gly Ser Ala Gly Thr His Ser Asn Gly Val			
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Ser Thr Gly Arg Cys Val Ala Phe Asn Gly Ser Val Lys Thr Cys Glu			
145	150	155	160
gtg gcg gcc tgg tgc ccg gtg gag gat gac aca cac gtg cca caa cct		528	
Val Ala Ala Trp Cys Pro Val Glu Asp Asp Thr His Val Pro Gln Pro			
165	170	175	
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Ala Phe Leu Lys Ala Ala Glu Asn Phe Thr Leu Leu Val Lys Asn Asn			
180	185	190	
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Ile Trp Tyr Pro Lys Phe Asn Phe Ser Lys Arg Asn Ile Leu Pro Asn			
195	200	205	
atc acc act act tac ctc aag tcg tgc att tat gat gct aaa aca gat		672	
Ile Thr Thr Tyr Leu Lys Ser Cys Ile Tyr Asp Ala Lys Thr Asp			
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ccc ttc tgc ccc ata ttc cgt ctt ggc aaa ata gtg gag aac gca gga		720	
Pro Phe Cys Pro Ile Phe Arg Leu Gly Lys Ile Val Glu Asn Ala Gly			
225	230	235	240
cac agt ttc cag gac atg gcc gtg gag gga ggc atc atg ggc atc cag		768	
His Ser Phe Gln Asp Met Ala Val Glu Gly Ile Met Gly Ile Gln			
245	250	255	
gtc aac tgg gac tgc aac ctg gac aga gcc gcc tcc ctc tgc ttg ccc		816	
Val Asn Trp Asp Cys Asn Leu Asp Arg Ala Ala Ser Leu Cys Leu Pro			
260	265	270	
agg tac tcc ttc cgc cgc ctc gat aca cgg gac gtt gag cac aac gta		864	
Arg Tyr Ser Phe Arg Arg Leu Asp Thr Arg Asp Val Glu His Asn Val			
275	280	285	
tct cct ggc tac aat ttc agg ttt gcc aag tac tac aga gac ctg gct		912	
Ser Pro Gly Tyr Asn Phe Arg Phe Ala Lys Tyr Tyr Arg Asp Leu Ala			
290	295	300	
ggc aac gag cag cgc acg ctc atc aag gcc tat ggc atc cgc ttc gac		960	
Gly Asn Glu Gln Arg Thr Leu Ile Lys Ala Tyr Gly Ile Arg Phe Asp			
305	310	315	320
atc att gtg ttt ggg aag gca ggg aaa ttt gac atc atc ccc act atg		1008	
Ile Ile Val Phe Gly Lys Ala Gly Lys Phe Asp Ile Ile Pro Thr Met			
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Cys Asp Ile Ile Val Leu Tyr Cys Met Lys Lys Arg Leu Tyr Tyr Arg			
355	360	365	
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35 40 45

Val Trp Glu Lys Gly Tyr Gln Glu Thr Asp Ser Val Val Ser Ser Val
50 55 60

Thr Thr Lys Val Lys Gly Val Ala Val Thr Asn Thr Ser Lys Leu Gly
65 70 75 80

Phe Arg Ile Trp Asp Val Ala Asp Tyr Val Ile Pro Ala Gln Glu Glu
85 90 95

Asn Ser Leu Phe Val Met Thr Asn Val Ile Leu Thr Met Asn Gln Thr
100 105 110

Gln Gly Leu Cys Pro Glu Ile Pro Asp Ala Thr Thr Val Cys Lys Ser
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130 135 140

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145 150 155 160

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Ala Phe Leu Lys Ala Ala Glu Asn Phe Thr Leu Leu Val Lys Asn Asn
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Ile Thr Thr Tyr Leu Lys Ser Cys Ile Tyr Asp Ala Lys Thr Asp
210 215 220

Pro Phe Cys Pro Ile Phe Arg Leu Gly Lys Ile Val Glu Asn Ala Gly
225 230 235 240

His Ser Phe Gln Asp Met Ala Val Glu Gly Gly Ile Met Gly Ile Gln
245 250 255

Val Asn Trp Asp Cys Asn Leu Asp Arg Ala Ala Ser Leu Cys Leu Pro
260 265 270

Arg Tyr Ser Phe Arg Arg Leu Asp Thr Arg Asp Val Glu His Asn Val
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Ser Pro Gly Tyr Asn Phe Arg Phe Ala Lys Tyr Tyr Arg Asp Leu Ala
290 295 300

Gly Asn Glu Gln Arg Thr Leu Ile Lys Ala Tyr Gly Ile Arg Phe Asp
305 310 315 320

Ile Ile Val Phe Gly Lys Ala Gly Lys Phe Asp Ile Ile Pro Thr Met
325 330 335

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340 345 350

Cys Asp Ile Ile Val Leu Tyr Cys Met Lys Lys Arg Leu Tyr Tyr Arg
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Cys Thr Arg Asp Tyr Lys Ile Thr Gln Val Leu Phe Pro Leu Leu Tyr		
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act gtc ctg ttt gtt gga ctt atc aca aat ggc ctg gcg atg agg		144
Thr Val Leu Phe Phe Val Gly Leu Ile Thr Asn Gly Leu Ala Met Arg		
35 40 45		
att ttc ttt caa atc cgg agt aaa tca aac ttt att att ttt ctt aag		192
Ile Phe Phe Gln Ile Arg Ser Lys Ser Asn Phe Ile Ile Phe Leu Lys		
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aac aca gtc att tct gat ctt ctc atg att ctg act ttt cca ttc aaa		240
Asn Thr Val Ile Ser Asp Leu Leu Met Ile Leu Thr Phe Pro Phe Lys		
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Ile Leu Ser Asp Ala Lys Leu Gly Thr Gly Pro Leu Arg Thr Phe Val		
85 90 95		
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Cys Gln Val Thr Ser Val Ile Phe Tyr Phe Thr Met Tyr Ile Ser Ile		
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Ser Phe Leu Gly Leu Ile Thr Ile Asp Arg Tyr Gln Lys Thr Thr Arg		
115 120 125		
cca ttt aaa aca tcc aac ccc aaa aat ctc ttg ggg gct aag att ctc		432
Pro Phe Lys Thr Ser Asn Pro Lys Asn Leu Leu Gly Ala Lys Ile Leu		
130 135 140		
tct gtt gtc atc tgg gca ttc atg ttc tta ctc tct ttg cct aac atg		480
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att ctg acc aac agg cag ccg aga gac aag aat gtg aag aaa tgc tct		528
Ile Leu Thr Asn Arg Gln Pro Arg Asp Lys Asn Val Lys Lys Cys Ser		
165 170 175		
ttc ctt aaa tca gag ttc ggt cta gtc tgg cat gaa ata gta aat tac		576
Phe Leu Lys Ser Glu Phe Gly Leu Val Trp His Glu Ile Val Asn Tyr		
180 185 190		

atc tgt caa gtc att ttc tgg att aat ttc tta att gtt att gta tgt Ile Cys Gln Val Ile Phe Trp Ile Asn Phe Leu Ile Val Ile Val Cys 195 200 205	624
tat aca ctc att aca aaa gaa ctg tac cggtc tac gta aga acg agg Tyr Thr Leu Ile Thr Lys Glu Leu Tyr Arg Ser Tyr Val Arg Thr Arg 210 215 220	672
ggt gta ggt aaa gtc ccc agg aaa aag gtg aac gtc aaa gtt ttc att Gly Val Gly Lys Val Pro Arg Lys Lys Val Asn Val Lys Val Phe Ile 225 230 235 240	720
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gaa aat act ctg ttc tat gtg aaa gag agc act ctg tgg tta act tcc Glu Asn Thr Leu Phe Tyr Val Lys Glu Ser Thr Leu Trp Leu Thr Ser 275 280 285	864
tta aat gca tgc ctg gat ccgttc atc tat ttt ttc ctt tgc aag tcc Leu Asn Ala Cys Leu Asp Pro Phe Ile Tyr Phe Phe Leu Cys Lys Ser 290 295 300	912
ttc aga aat tcc ttg ata agt atg ctg aag tgc ccc aat tct gca aca Phe Arg Asn Ser Leu Ile Ser Met Leu Lys Cys Pro Asn Ser Ala Thr 305 310 315 320	960
tct ctg tcc cag gac aat agg aaa aag gaa cag gat ggt ggt gac cca Ser Leu Ser Gln Asp Asn Arg Lys Lys Glu Gln Asp Gly Gly Asp Pro 325 330 335	1008
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Thr Val Leu Phe Phe Val Gly Leu Ile Thr Asn Gly Leu Ala Met Arg
35 40 45

Ile Phe Phe Gln Ile Arg Ser Lys Ser Asn Phe Ile Ile Phe Leu Lys

50

55

60

Asn Thr Val Ile Ser Asp Leu Leu Met Ile Leu Thr Phe Pro Phe Lys
65 70 75 80

Ile Leu Ser Asp Ala Lys Leu Gly Thr Gly Pro Leu Arg Thr Phe Val
85 90 95

Cys Gln Val Thr Ser Val Ile Phe Tyr Phe Thr Met Tyr Ile Ser Ile
100 105 110

Ser Phe Leu Gly Leu Ile Thr Ile Asp Arg Tyr Gln Lys Thr Thr Arg
115 120 125

Pro Phe Lys Thr Ser Asn Pro Lys Asn Leu Leu Gly Ala Lys Ile Leu
130 135 140

Ser Val Val Ile Trp Ala Phe Met Phe Leu Leu Ser Leu Pro Asn Met
145 150 155 160

Ile Leu Thr Asn Arg Gln Pro Arg Asp Lys Asn Val Lys Lys Cys Ser
165 170 175

Phe Leu Lys Ser Glu Phe Gly Leu Val Trp His Glu Ile Val Asn Tyr
180 185 190

Ile Cys Gln Val Ile Phe Trp Ile Asn Phe Leu Ile Val Ile Val Cys
195 200 205

Tyr Thr Leu Ile Thr Lys Glu Leu Tyr Arg Ser Tyr Val Arg Thr Arg
210 215 220

Gly Val Gly Lys Val Pro Arg Lys Lys Val Asn Val Lys Val Phe Ile
225 230 235 240

Ile Ile Ala Val Phe Phe Ile Cys Phe Val Pro Phe His Phe Ala Arg
245 250 255

Ile Pro Tyr Thr Leu Ser Gln Thr Arg Asp Val Phe Asp Cys Thr Ala
260 265 270

Glu Asn Thr Leu Phe Tyr Val Lys Glu Ser Thr Leu Trp Leu Thr Ser
275 280 285

Leu Asn Ala Cys Leu Asp Pro Phe Ile Tyr Phe Phe Leu Cys Lys Ser
290 295 300

Phe Arg Asn Ser Leu Ile Ser Met Leu Lys Cys Pro Asn Ser Ala Thr
305 310 315 320

Ser Leu Ser Gln Asp Asn Arg Lys Lys Glu Gln Asp Gly Gly Asp Pro
325 330 335

Asn Glu Glu Thr Pro Met
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